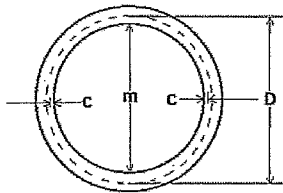


Brake Drums #1 Quiz

Name KEY



$$m + 2c < D$$

1. The maximum diameter of a brake drum is 11.075 inches. The drum measures 11.050 inches. After machining .012 inch cut from the drum to remove score marks, you must determine if the drum is still usable. Can it be reused?

$$m = 11.050$$

$$c = .012$$

$$D = 11.075$$

$$m + 2c < D$$

$$11.050 + 2(.012) < 11.075$$

$$11.050 + .024 < 11.075$$

$$11.074 < 11.075$$

True - yes, can be reused

2. The maximum diameter of a brake drum is 12.050 inches. The drum measures 12.000 inches. After machining 0.024 inch cut from the drum to remove score marks, you must determine if the drum is still usable. Can it be reused?

$$m = 12.000$$

$$c = .024$$

$$D = 12.050$$

$$m + 2c < D$$

$$12.000 + 2(.024) < 12.050$$

$$12.000 + .048 < 12.050$$

$$12.048 < 12.050$$

True - yes, can be reused

3. The maximum diameter of a brake drum is 10.075 inches. The drum measures 10.045 inches. After machining 0.016 inch cut from the drum to remove score marks, you must determine if the drum is still usable. Can it be reused?

$$m = 10.045$$

$$c = .016$$

$$D = 10.075$$

$$m + 2c < D$$

$$10.045 + 2(.016) < 10.075$$

$$10.045 + .032 < 10.075$$

$$10.077 < 10.075$$

False - cannot be reused

4. Is $(x, y) = (9, 7)$ a solution to the following inequality?

$$4x - 3y < 16$$

$$4(9) - 3(7) < 16$$

$$36 - 21 < 16$$

$$15 < 16 \quad \text{True}$$

5. Is $(x, y) = (7.8, 10.25)$ a solution to the following inequality?

$$y + 10x < 87.9$$

$$10.25 + 10(7.8) < 87.9$$

$$10.25 + 78 < 87.9$$

$$88.25 < 87.9$$

False